

REMARKS

Reconsideration and allowance are respectfully requested.

Submitted herewith and under separate cover is a corrected declaration providing the full name of each inventor and identifying this application by its corresponding application number and filing date as requested.

Attached hereto is a corrected formal drawing for Figure 2 including the label --Prior Art-- as requested.

The specification has been amended to include section headings in accordance with MPEP § 608.01(a) and to clarify the definition of the term "pc".

Attached hereto are substitute claims with 1.5 spacing between lines as requested.

Applicant respectfully traverses the rejections to the claims based on KRAFT et al. (US 5,498,127) for the reasons identified below.

The present invention consists of a passive acoustic liner system 50 for attenuating a sound field comprising, in acoustic series, a mode-scattering segment 48 and a sound absorbing segment 40. The mode scattering segment provides a reactance between $-12pc$ and $-2pc$, and the sound absorbing segment provides a reactance between -1 and $0pc$. This arrangement provides a reactance discontinuity such that mode scattering of the sound field enables the sound absorbing segment to further absorb the scattered sound.

KRAFT et al. discloses an active liner 24 utilizing a piezoelectric panel (24) and a controller 36 including a predetermined schedule of acoustic impedance at corresponding frequencies for effecting a corresponding velocity of the panel displacement for a given acoustic pressure, as sensed by the pressure transducer 30, for obtaining the predetermined acoustic impedance in the schedule to attenuate the noise 20 at the corresponding frequency.

The invention to KRAFT et al. involves the use of an active liner wherein the present invention utilizes a passive liner. KRAFT et al. does not seek to exploit mode scattering and does not utilize the large negative reactances of the present invention ($-12pc$ to $-2pc$). Furthermore, the mode scattering segment 28

of KRAFT et al., as identified by the Examiner, is not similar to the mode scattering segment 48 of the present invention. The present invention's mode scattering segment 48 is specifically designed to scatter noise in the region of 1500Hz, and capable to scatter noise in the range of 750Hz and 3000Hz. The mode scattering segment 28 of KRAFT et al. is described as a piezoelectric panel which upon an application of voltage applied thereto effects mechanical strain which changes the panel's thickness. By exciting the piezoelectric panel 28, the thickness may expand or contract to predeterminedly control the velocity thereof (Column 3 lines 4-35).

KRAFT et al. does not disclose a mode scattering segment in which to provide a reactance discontinuity such that the mode scattering of the sound field enables the sound absorbing segment to further absorb the scattered sound as claimed in claim 1.

Therefore, from the above arguments, KRAFT et al. does not anticipate the present invention either alone or in combination with CLARK (US 2003/0098200).

Having addressed all the points raised in the Office action, it is believed that the application is now entitled to favorable treatment and this is earnestly solicited.

Respectfully submitted,



W. Warren Taltavull

Reg. No. 25647

Manelli, Denison & Selter PLLC
2000 M Street N.W.
Washington, D.C. 20036
202 262 1047